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Report of the Ottawa Group on Price Indexes

Note by the Secretary-General

In accordance with a request of the Statistical Commission at its thirty-second session,** the Secretary-General has the honour to transmit to the Commission the report of the Ottawa Group on Price Indexes. The Commission may wish to review the work programme of the Group.

* E/CN.3/2002/1.

** See *Official Records of the Economic and Social Council, 2001, Supplement No. 4* (E/2001/24), chap. I, sect. A.

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Report of the Ottawa Group on Price Indexes

Purpose

The Ottawa Group on Price Indexes was created to provide a forum for specialists to share their experience and discuss research on crucial problems of measuring price change. Without avoiding theoretical issues, the focus of the Group is on applied research, particularly — though not exclusively — in the area of consumer price indexes (CPIs). Participants are specialists and practitioners who work for or are advisers to statistical agencies in different countries or international organizations.

Year organized

1994.

Participants

Members of the national statistical offices of Australia, Austria, Brazil, Canada, Chile, China, Denmark, Finland, France, Germany, Iceland, Indonesia, Israel, Italy, Japan, Korea, the Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Thailand, the United Kingdom and the United States of America, of the Statistical Office of the European Communities (Eurostat) and of the International Monetary Fund, the International Labour Organization, the Economic Commission for Europe and the Organisation for Economic Cooperation and Development have attended at least one meeting, as have other experts or members of national statistical offices of other countries.

Meetings (approximately every 12 to 18 months)

Meetings held to date

Ottawa, 31 October-3 November 1994.

Stockholm, 15-17 November 1995.

Voorburg, 16-18 April 1997.

Washington, D.C., 22-24 April 1998.

Reykjavik, 25-27 August 1999.

Canberra, 16-21 April 2001.

Meetings scheduled

Paris, November 2002.

Finland, 2003.

Proceedings of the meetings include the papers, a summary of the discussions and a report of recommendations on which agreement has been reached.

Meetings focus on a small number of topics in order to concentrate the preparatory work and the discussions. Proceedings of the most recent meeting, held in Canberra, are available on the Group's web site at www4.statcan.ca/secure/english/ottawagroup/.

Topics considered

Fundamental problems of measurement, particularly at the microlevel, have been constant themes. Such problems include estimation (for example, the adoption of the geometric mean at the first step of calculation), sampling and the treatment of quality change in all its manifestations. Questions of bias were considered explicitly at the 1994 and 1997 meetings. The different requirements of indexes for different purposes, such as inflation measurement and measures for compensation, have been discussed at more than one meeting. Other topics covered include certain difficult areas of consumer price indexes, such as health and financial services, survey methodology and management, and the growing availability of electronic sales databases (scanner data).

Since 1999, the discussion of the Group has concentrated on the use of different techniques and procedures dealing with quality changes in price indices for durable goods and services in order to derive some best practices. Although the meeting in Reykjavik focused mainly on durable goods, it also discussed the conceptual basis of different requirements of indexes for different purposes.

In 2001, quality change continued to be an important issue for discussion, but in the context of services. Five main topics were discussed at the meeting: (a) quality adjustment and scanner data; (b) new and disappearing goods; (c) financial services; (d) telecommunication services; and (e) miscellaneous areas of new or ongoing research.

1. Quality adjustment and scanner data

The papers considered under this topic covered a range of issues relating to the adjustment of prices for

changes in quality and to the use of scanner data for the compilation of the CPI. A number of recommendations were made to statistical agencies regarding the use of the various methods of controlling or adjusting for quality change and the use of scanner data.

Recommendations

(a) Update price samples as frequently as is possible and reasonable.

(b) Use matched samples where it is expected that the proportion of matched items will be large (i.e., where new and disappearing goods are expected to account for only a small proportion of items).

(c) Use hedonic models where new and disappearing goods are likely to account for a significant proportion of items.

(d) Hedonic regression models should use the logarithm of price as the dependent variable, and preferably also logarithms of the independent variables — regressions that are linear in raw variables are to be avoided.

(e) Separate hedonic regressions should be run for each time period.

(f) Quantity weights should be used in hedonic regressions, if possible.

(g) Currently, scanner data are not used as a method of price collection; that would require that they cover the universe of items and that they increase their reliability.

(h) Scanner data for various items are, however, very promising for analytical studies, especially for testing hypotheses about price movements and simulating different methods of their measurement.

(i) Scanner data have the potential to provide other useful information to price statisticians and deserve further exploration.

(j) Further study of the cost-effectiveness of scanner data is required.

2. New and disappearing goods

The second topic dealt with the issue of new and disappearing goods. The traditional fixed weight/Laspeyres type indexes, which are used in the compilation of most consumer price indexes, do not allow for substitutions between commodities and cannot adequately allow for new goods. Similarly, the Paasche index using current period weights cannot handle goods that have disappeared since the base period. Changes to the item coverage of those indexes over time can only be handled by linking (or chaining), which also requires reweighting.

Recommendations

Although the participants to the meeting recommended that further work needed to be devoted to this important topic, two promising alternatives were identified: (a) the use of a "constant elasticity of substitution" formula and (b) the extension of the Fisher formula to include new and disappearing goods.

3. Financial services

In the past, financial services other than insurance have typically been ignored or badly covered in consumer price indexes, reflecting the lack of a conceptual framework for their measurement and the difficulty of obtaining reliable data.

Recommendations

(a) The method of defining and measuring financial services for inclusion in the consumer price index requires further investigation if it is to lead to a universally accepted position.

(b) Care needs to be paid to the dynamic changes within this sector since the emphasis given to explicit and implicit components change and interact and the quality of the service provided changes.

(c) Participants were supportive of the approach to pricing deposit and loan facilities outlined by the Australians, which provided a sound theoretical base for capturing all the prices associated with these services; however, the data demands are extensive and may not be realizable in many countries.

4. Telecommunication

The papers presented in this session highlight the challenges that rapid change in technology, the rapid uptake by consumers of telecommunications

technology, changes in regulatory environments, the intense market competition and wide range of pricing regimes applying to telecommunication services have created for price statisticians in most countries. In a sense, all the practical problems that can occur in price index construction are inherent in these commodities: new and disappearing goods; new and disappearing respondents; quality change; and measuring the quantum of services consumed (it is not only the number of households using the service but also their intensity of use).

Recommendations

The accurate measurement of price change for telecommunication services is complicated. There are difficulties in defining the quantums that are consumed, in determining appropriate prices for those quantums and in adjusting for quality change. The current thinking of price statisticians is that use of profiles and samples of accounts are the best methods. However, the data requirements and resources needed to establish and maintain those approaches are substantial and cooperation of the service providers is essential. What is certain is that traditional sampling methods are not appropriate in this sector.

5. *Miscellaneous areas of new or ongoing research*

This session dealt with such issues as the targeted universe for CPI, the user cost approach and market liberalization.

Recommendations

Papers and discussion tended to enforce general observations along the following lines:

(a) The universe of goods and services for CPI is dynamic, and compilation techniques and procedures need to be appropriately suited to that dynamic nature.

(b) The concept of CPI commodity structures based more heavily on the utility service flow concept is worth pursuing since it is better able to handle complementary goods and may help to provide a basis for determining new goods.

(c) Changes in regulations regarding market entry of new suppliers and price determination poses substantial challenges and resource demands for CPI compilers if they are to "get it right".

Also, at the invitation of the technical expert group on consumer price indexes, a session was devoted to a discussion of the new manual on consumer price indices being prepared for the International Labour Organization. The major concern of Ottawa Group participants was that the manual lacked a clear focus. They felt that the principal objective of the manual should be to provide guidelines to statisticians in national agencies responsible for compiling consumer price indexes. The consensus views of meeting participants were conveyed to the technical expert group in a communiqué, a copy of which will be reproduced on the web site of the Ottawa Group.

Summaries of each session are available on the Group's web site.

Products

Papers and proceedings of the meetings are published on the Group's web site.

Planned activities

The next meeting of the Group will be hosted by the Institut national de la statistique et des études économiques in Paris in November 2002. Statistics Finland has offered to host the subsequent meeting in 2003-2004.

The following are the topics for the next meeting:

- Financial services, including insurance;
- Health and social services;
- E-commerce;
- Coping with changes to complex pricing schemes.

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